Please substitute the following paragraph [0136] for pending paragraph [0136]:

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As described herein, embodiments of the invention are capable of interacting with other devices as part of a personal area network. FIG. 38 illustrates one embodiment of a wireless transceiver biometric device 3800 according to the invention. Device 3800 comprises a biometric device similar to device 1200, described above, a DSP chip 3802, a BLUETOOTH chip 3804, a display 3806, and a battery 3808. As described above, device 1200 has a piezo ceramic sensor array 700 and four multiplexers 1225 according to the invention.

Please substitute the following paragraph [0137] for pending paragraph [0137]:

Biometric device 1200 is coupled to a DSP 3802. DSP 3802 controls device 1200 and stores biometric data. DSP 3802 is also coupled to BLUETOOTH chip 3804 for sending and receiving data. A display 3806 is used to communicate information to a user of device 3800. Device 3800 is powered by a battery 3808. As would be known to a person skilled in the relevant art, BLUETOOTH is an agreement that governs the protocols and hardware for a short-range wireless communications technology. The invention is not limited to implementing only the BLUETOOTH technology. Other wireless protocols and hardware can also be used.

In the Abstract

Please substitute the following Abstract, which is also reproduced on a separate page filed herewith, for the pending Abstract:

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An identification device having a piezoelectric sensor array is used to obtain biometric data. Multiplexers are switched to control the sensor. The device has several operating modes for obtaining a variety of biometric data, including an impedance detection mode, a voltage detection mode, an imaging mode, and a Doppler-shift detection mode. The

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presence of a fingerprint on the sensor can be used to turn-on the device. The device is capable of capturing a fingerprint, forming a three-dimensional map of a finger bone, and/or determining the direction and speed of arteriole and/or capillary blood flow in a finger. A single pixel or a group of pixels can be detected and readout to a memory. The device can be used as an electronic signature device. The device can operate as part of a personal area network, using a public service layer according to the invention.